

DETAILED ACTION

1. The Applicant's amendment filed on March 15, 2010, was received. Claim 2 has been amended. Claims 1, 5-10, 12-13, 16 and 22-93 have been cancelled. Therefore, Claims 2-4, 11, 14, 15 and 17-21 are pending in this office action.

Claim Rejections - 35 USC § 103

2. The rejection of Claims 5-10 and 91-93 under 35 U.S.C. 103(a) as being unpatentable over Hanafusa et al. (US 6,844,105 B1) in view of Chiang et al. (US 2003/0082446 A1) are overcome based on the amendments to the claims.

Reasons for Allowance

3. Claims 2-4, 11, 14, 15 and 17-21 are allowed.

4. The following is an examiner's statement of reasons for allowance: the instant claims are to a bipolar article, the article comprising: (a) a housing comprising an inside surface; wherein the inside surface has an arbitrary form factor which is not cylindrical or prismatic; (b) a bipolar structure comprising a cathode current collector, an anode current collector, an anode, a cathode, and an electrolyte in contact with and separating the anode and cathode; wherein the anode and cathode are interpenetrating; the cathode current collector is in electronic communication with the cathode; and the anode current collector is in electronic communication with the anode; wherein the bipolar structure as a whole has an arbitrary form that is not cylindrical or prismatic; and at least one of the cathode, the anode, and their respective current collectors is

conformal to the inside surface of the housing; wherein the anode and cathode are self-assembling networks of particles disposed in the electrolyte; and wherein the cathode current collector is attractive to the cathode network and repulsive to the anode network, and the anode current collector is attractive to the anode network and repulsive to the cathode network. Claim 11 teaches a similar product, as claimed.

The most pertinent prior art has been presented. The prior art does not teach the claimed invention.

With regard to Claim 2, the closest prior art, Chaing et al. (US 2003/0082446 A1) and Hanafusa et al. (US 6,844,105 B1) do not teach or fairly suggest a bipolar article wherein the anode and cathode are interpenetrating; wherein the bipolar structure as a whole has an arbitrary form that is not cylindrical or prismatic; and at least one of the cathode, the anode, and their respective current collectors is conformal to the inside surface of a housing; wherein the anode and cathode are self-assembling networks of particles disposed in the electrolyte the cathode current collector is attractive to a cathode network and repulsive to an anode network, and the anode current collector is attractive to the anode network and repulsive to the cathode network, and wherein one or both of the anode and cathode current collectors comprises a coating providing a repulsive force between the current collectors and the opposite anode or cathode network.

With regard to Claim 11, the closest prior art, Hanafusa et al. (US 6,844,105 B1) and Chiang et al. (US 2003/0082446 A1), do not teach or fairly suggest a bipolar article having an arbitrary form factor, comprising a an anode, a cathode, an electrolyte in

Art Unit: 1795

contact with the anode and cathode, a cathode current collector, and an anode current collector, wherein the cathode current collector is attractive to the cathode network and repulsive to the anode network, and the anode current collector is attractive to the anode network and repulsive to the cathode network, wherein the bipolar article as a whole has an overall form that is not cylindrical or prismatic, the form including a thickness that varies across the length or width of the article.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill Apicella whose telephone number is (571)272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1795

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/PATRICK RYAN/
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